## <u>ABSTRACT</u>

The invention is a system for recording and reading both program data and acoustical control data and playing back the data to optimize performance of audio reproduction and recreate the effect of an original acoustic environment. The system has a recording apparatus, a playback apparatus and a recording media. The recording apparatus produces recording media having both acoustic control information and audio data. The playback apparatus gives the user some ability to override otherwise automatic parameter adjustments. Optionally, a metadata display system takes information about the physical arrangement of instruments and other characteristics of the recording session and the recording studio and makes that visually available to the listener. A player type register identifies the characteristics of the playback device to cause an adjustment of the characteristics of the playback system.